Guidance for ARRA Smart Grid Program Metrics and Benefits		
Guidance ID	G-002	
Metric	Reliability Indices	
Smart Grid Category	All	
Metric Type	Impact	
Issue Date	April 15, 2010	
Revision and Date	N/A	

Background

Improving grid reliability is a key theme underlying the Smart Grid Investment Grant and Smart Grid Demonstration programs ("Smart Grid Programs"). The Department of Energy (DOE) seeks to standardize reliability information it receives from Smart Grid Programs in order to uniformly and consistently evaluate the reliability impact of Smart Grid technologies on the grid.

Guidance

- Project Teams should report reliability metrics consistent with IEEE STD 1366™ 2003.
- DOE recognizes that some Smart Grid Programs are required to report reliability indices in accordance with local or state regulatory ("local") bodies which may differ from IEEE STD 1366™ 2003.
- When local requirements differ from the IEEE standard, Project Teams should provide local indices. However, they should provide documentation explaining the differences in nomenclature, specifications, calculation methodologies, and any necessary conversion factors and data so that DOE can convert local indices to IEEE standards.
- Project Teams should provide a description of data sources used to calculate reliability indices, including new sources that may result from the project. Examples of data sources may include: Supervisory Control and Data Acquisition (SCADA) systems, Interactive Voice Response (IVR) systems, Call Center Reports, Trouble Tickets, or Advanced Metering Infrastructure (AMI) outage or restoration notifications.
- Project Teams should provide a description of the systems or processes utilized to aggregate, identify, analyze and filter source data. Examples of systems may include: Outage Management Systems, Distribution Management Systems, Work Management Systems, or Customer Information Systems.

By using IEEE standards or providing the necessary conversion information for local reliability indices, Smart Grid Programs will enable DOE to uniformly evaluate impact metrics and ultimately determine the effect of Smart Grid technologies on grid reliability.